



Conservation Incentives to Improve Water Quality



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United States Department of Agriculture
Natural Resources Conservation Service

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Why Healthy Soils?



Soil Health \Rightarrow Water Quality



The nation that destroys its soil destroys itself.

Franklin Roosevelt



Managing for a Healthy Soil

- Manage more by disturbing soil less.
- Keep a living root growing throughout the year.
- Diversify soil biota with plant diversity.
- Keep the soil covered as much as possible.
- Build soil organic matter.

Will Target \$1M+ in FY 2015

Conservation Practices with Big Impact



- Crop Rotation
- Cover Crops
- Conservation Tillage
- Prescribed Grazing
- Access Control
- Riparian Forest Buffer (and other vegetated buffers)
- Precision Application of Nutrients & Pesticides
- Critical Area Planting
- Gully & Streambank Stabilization
- Hydrologic restoration

A photograph of a cornfield under a clear blue sky. In the foreground, there are rows of green cover crops, likely soybeans, growing in the spaces between the corn rows. The corn plants are tall and green, with some tassels visible. The rows of crops stretch into the distance, creating a sense of depth. The background shows a line of trees.

328 – Conservation Crop Rotation
329 – Residue Management – No Till
340- Cover Crop
590 – Nutrient Management

Conventional Tillage; no cover crop

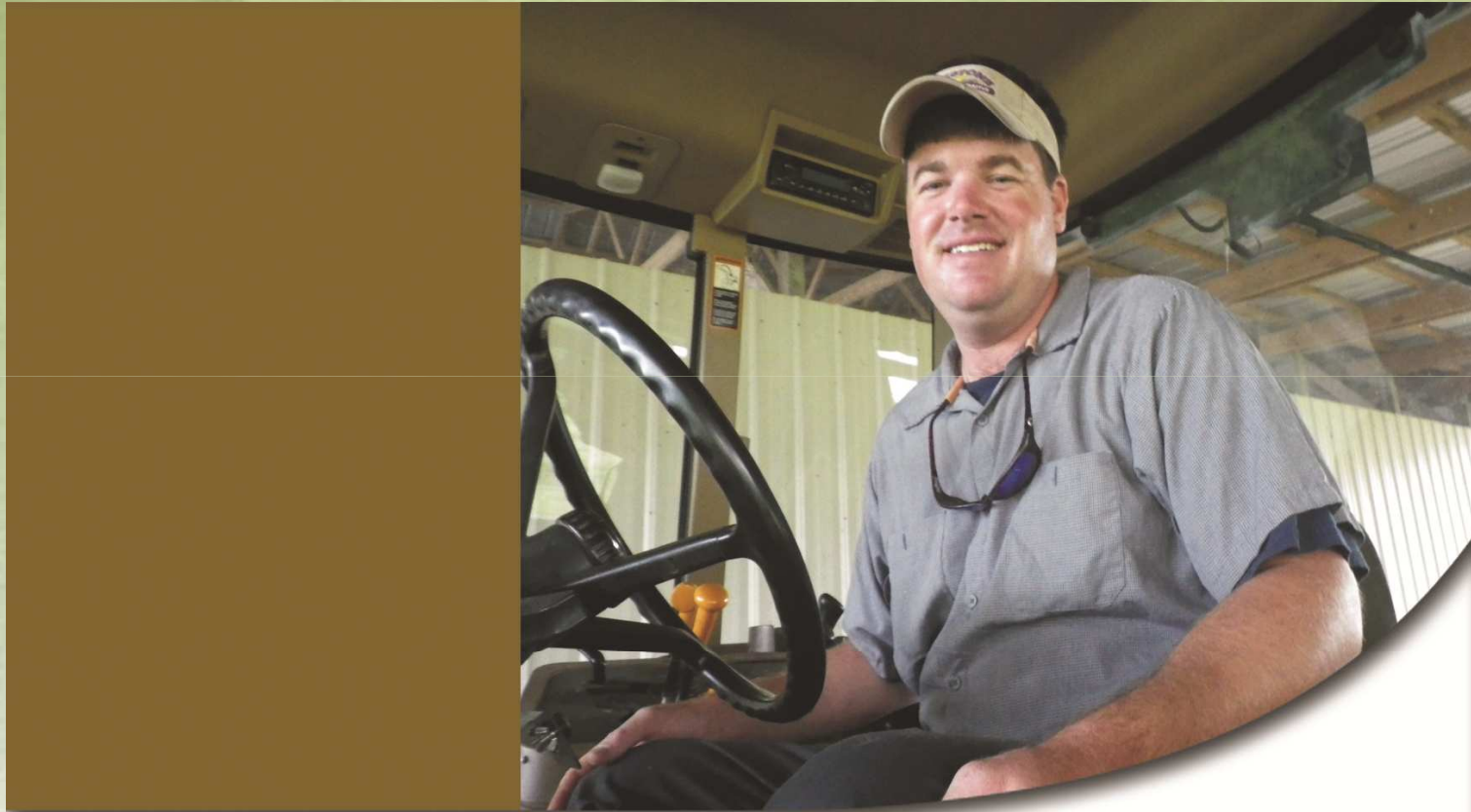


Using Big Cover Crops to Build and Maintain Soil Health



Ricky and Russell Wiggins

Improving Soil With a Conservation System and Precision Placement of Litter



Stan Usery

NUTRIENT MANAGEMENT OF ANIMAL WASTE APPLIED TO PROTECT WATER QUALITY





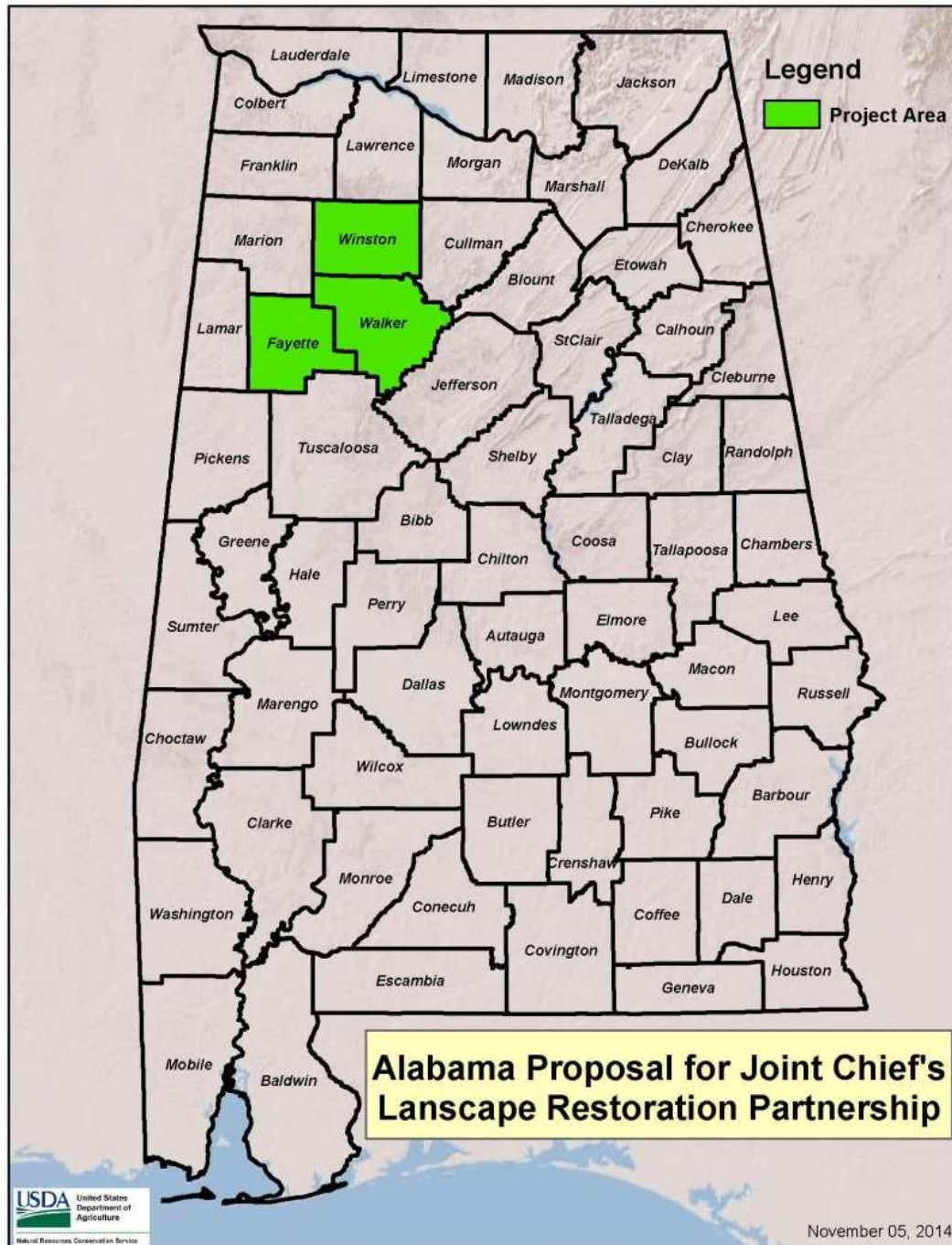
Riparian Buffers

- Chief's Joint Partnership Proposal
- Environmental Quality Incentives Program (EQIP)
 - \$202+/acre to establish hardwood trees to re-establish riparian areas
 - Landowners get extra ranking points if they leave at least 70' streamside buffer when harvesting trees
 - \$109 per foot for streambank protection



Field Days and
Landowner Visits:

Highlight the
importance of the
riparian buffer
ecosystems



Protecting Soil Health Using Good Grazing Practices



Charles Holmes

Cattle Stream Exclusion



Cattle Stream Exclusion



- Pathogens
- Organic Enrichment
- Sediment Load

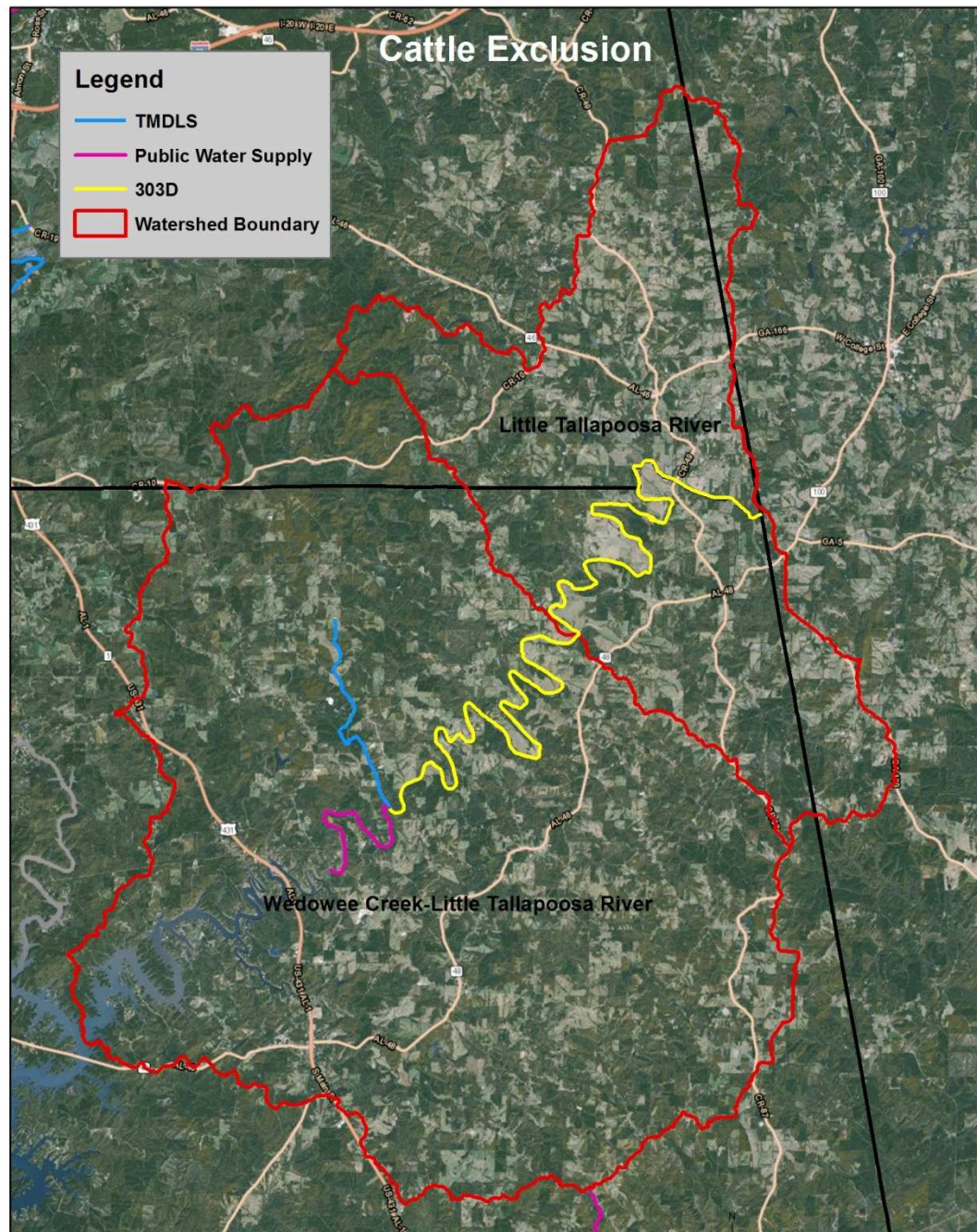


578 – Stream Crossing
528 – Prescribed Grazing
472 – Access Control
590 – Fence

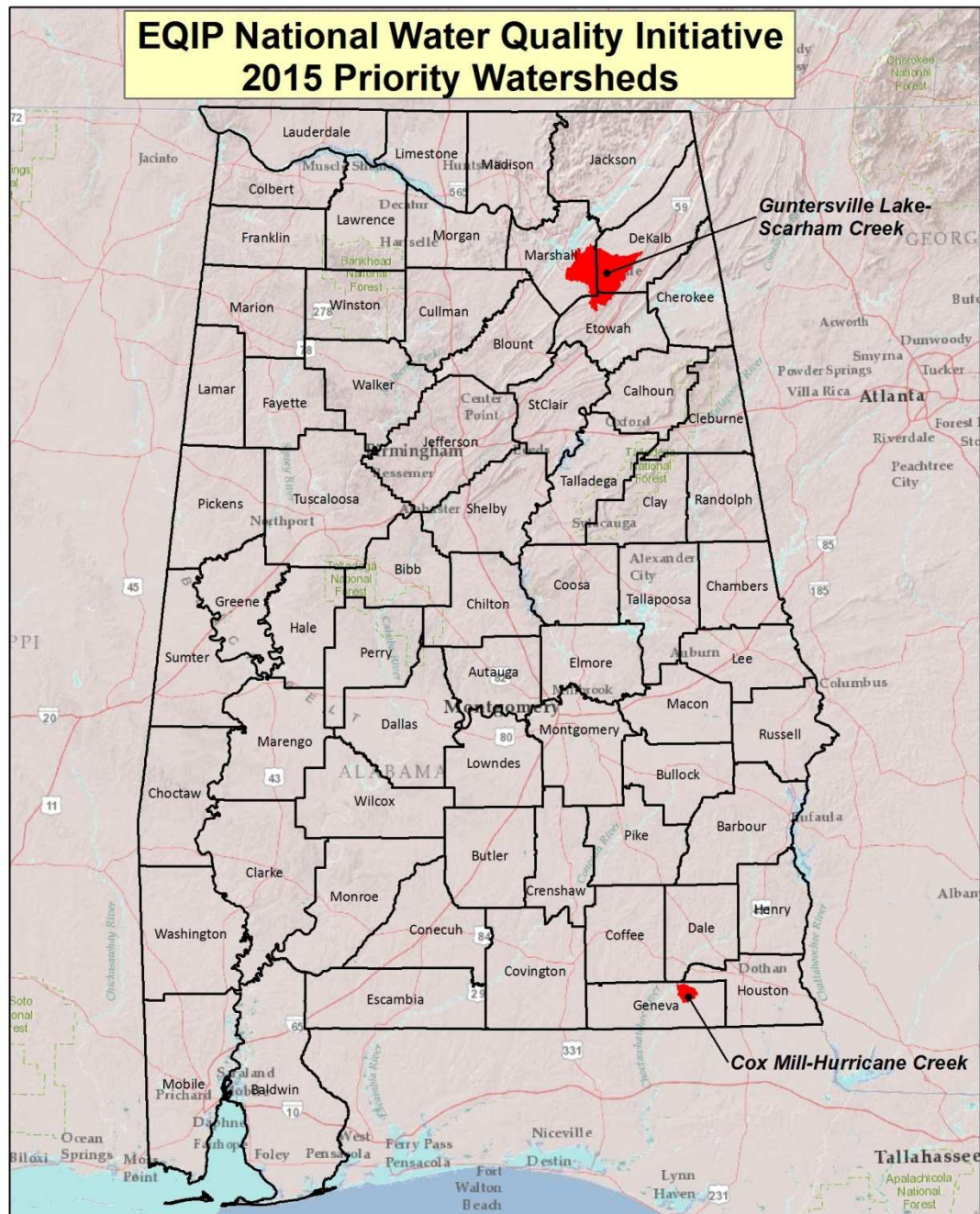




2014 Pilot Project Area



EQIP National Water Quality Initiative 2015 Priority Watersheds

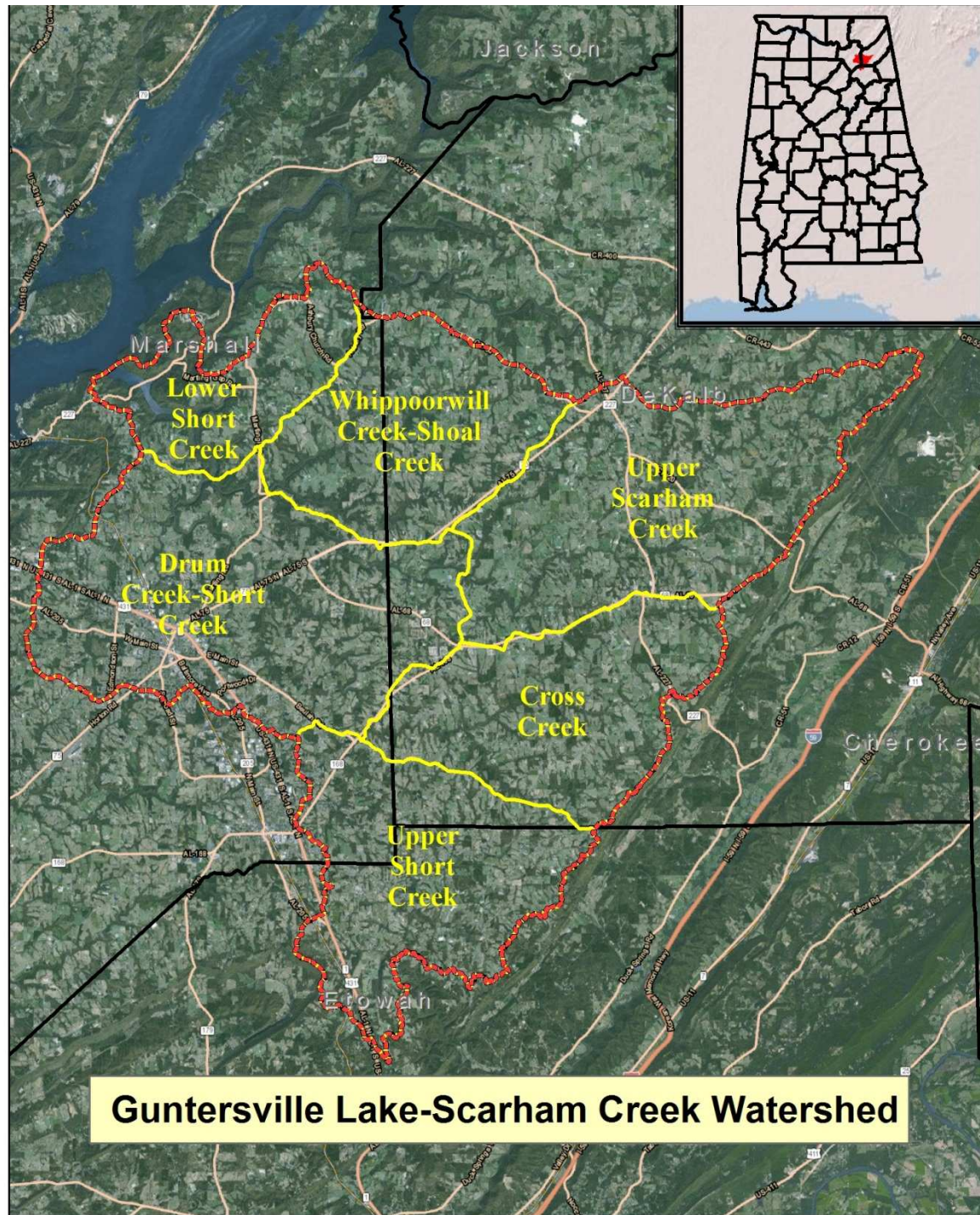


Targeted
Conservation

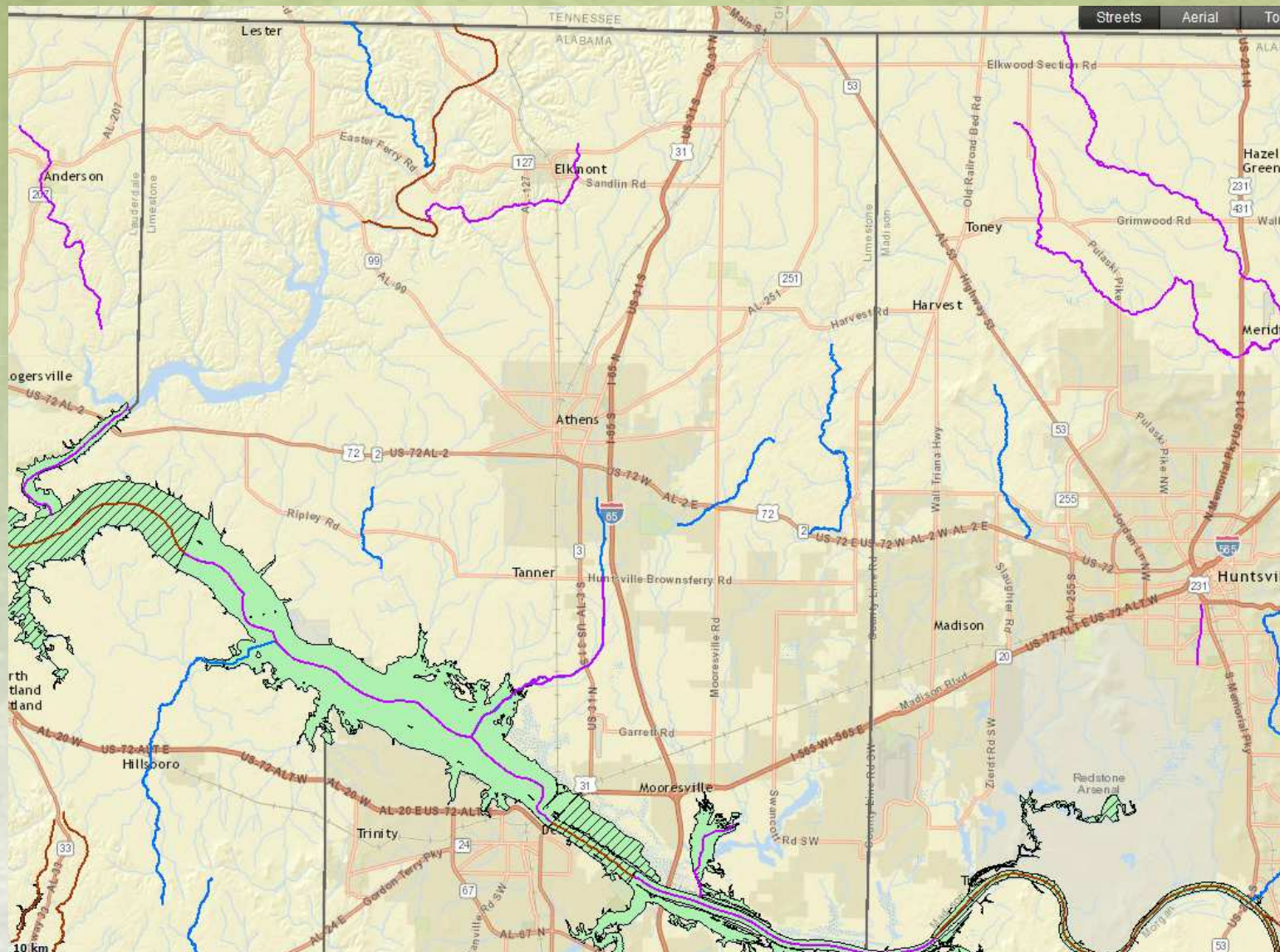


TMDL & Public Water Supply:

- Impairments:
 - Ammonia
 - Atrazine
 - CBOD
 - NBOD
 - Chlorpyrifos
 - Endosulfan
 - Fecal Coliform
 - Methyl Parathion
 - Siltation



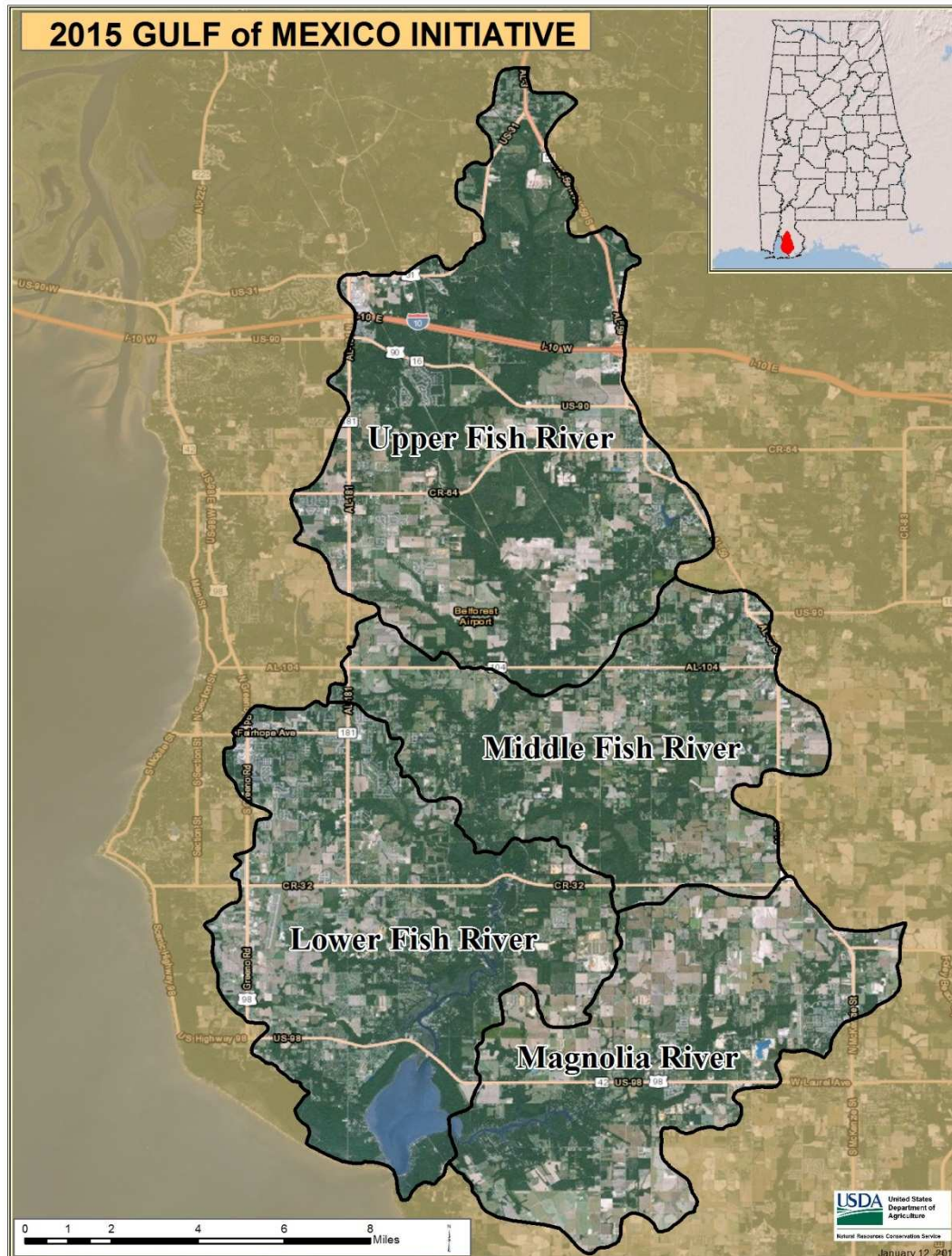
Source Water Protection





Targeted Conservation

- Water Quality
- Soil Erosion
- Soil Quality
- Fish & Wildlife Habitat



Gully Erosion



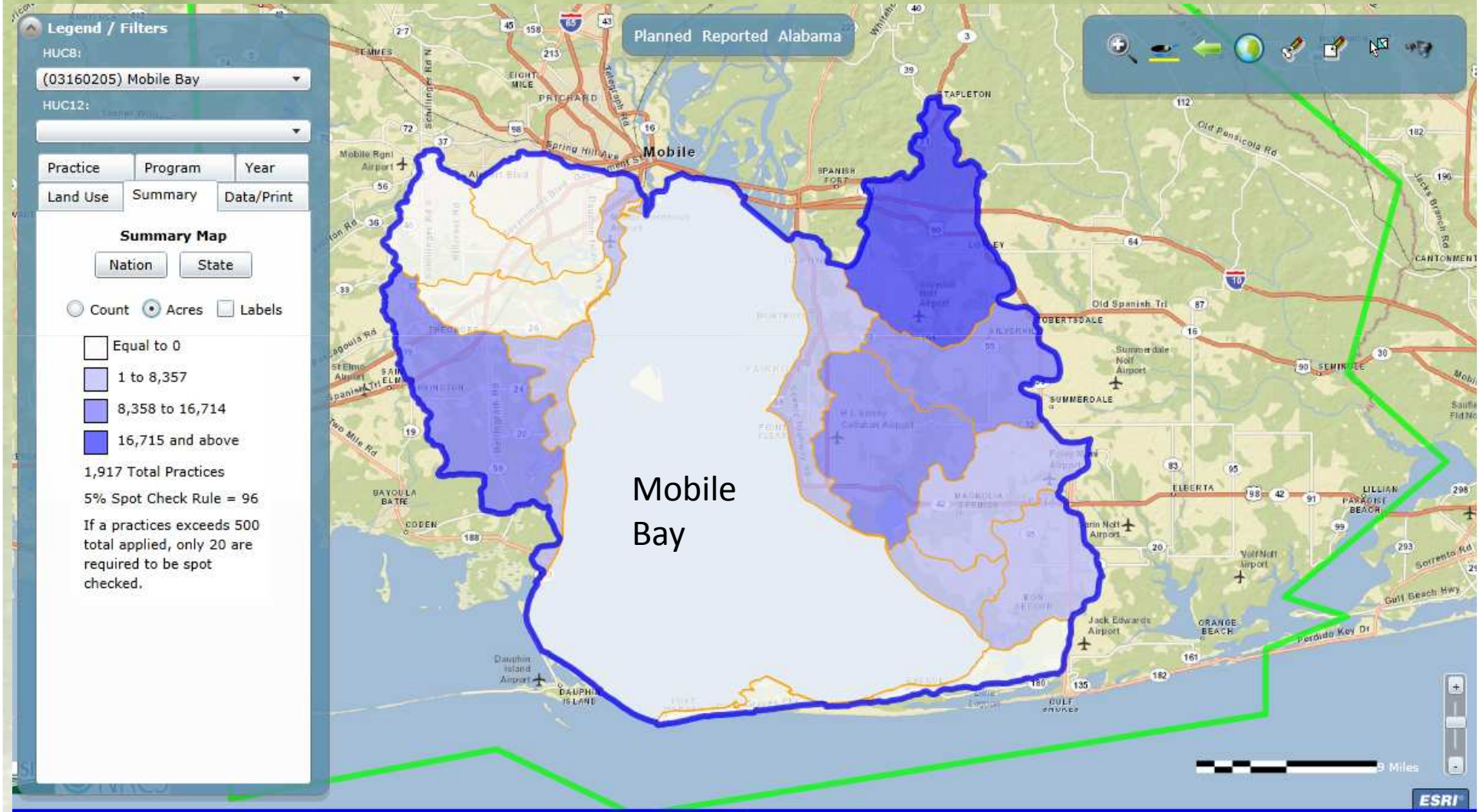
412 – Grassed Waterway
590 – Nutrient Mngt. – Precision
340 – Cover Crop
329 – Residue Management



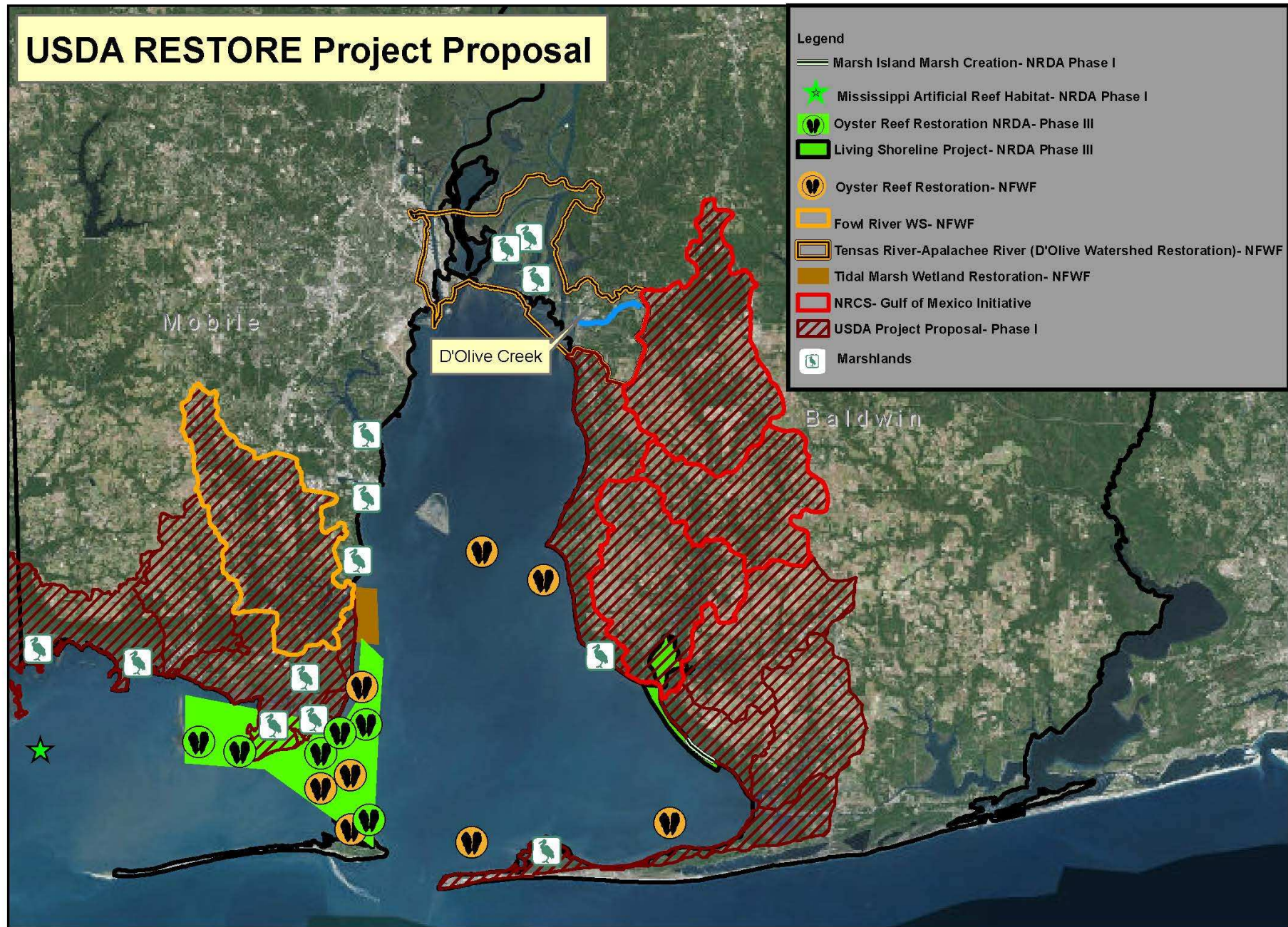
PRECISION APPLICATION OF NUTRIENTS AND PESTICIDES



Conservation Practices



USDA RESTORE Project Proposal







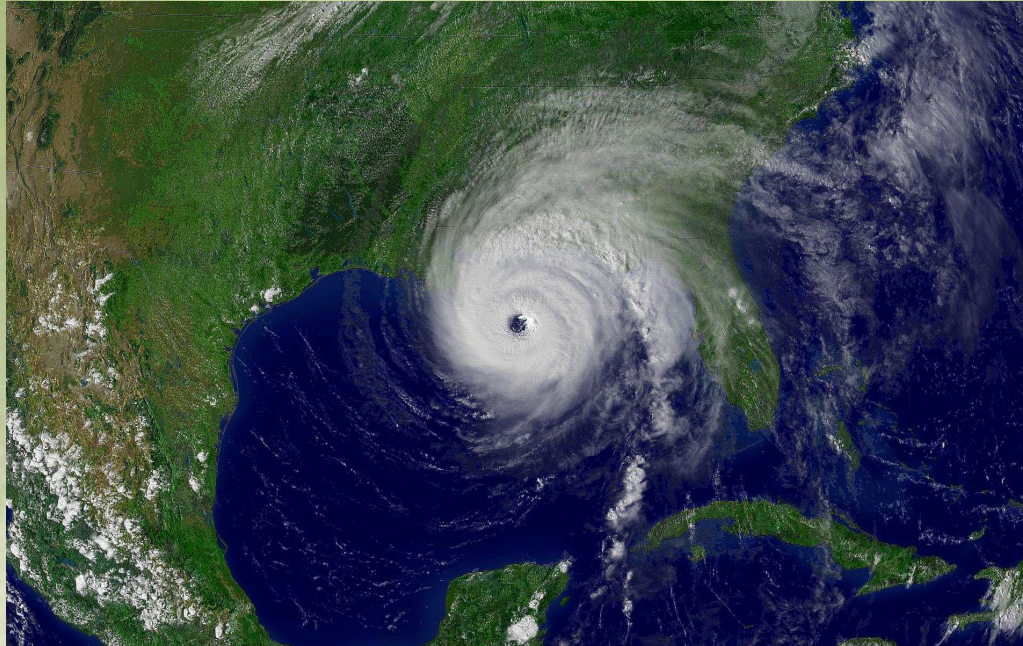
unlock the
SECRETS
IN THE
SOIL





unlock the
SECRETS
IN THE
SOIL

Emergency Watershed Protection (EWP) Program (RECOVERY)



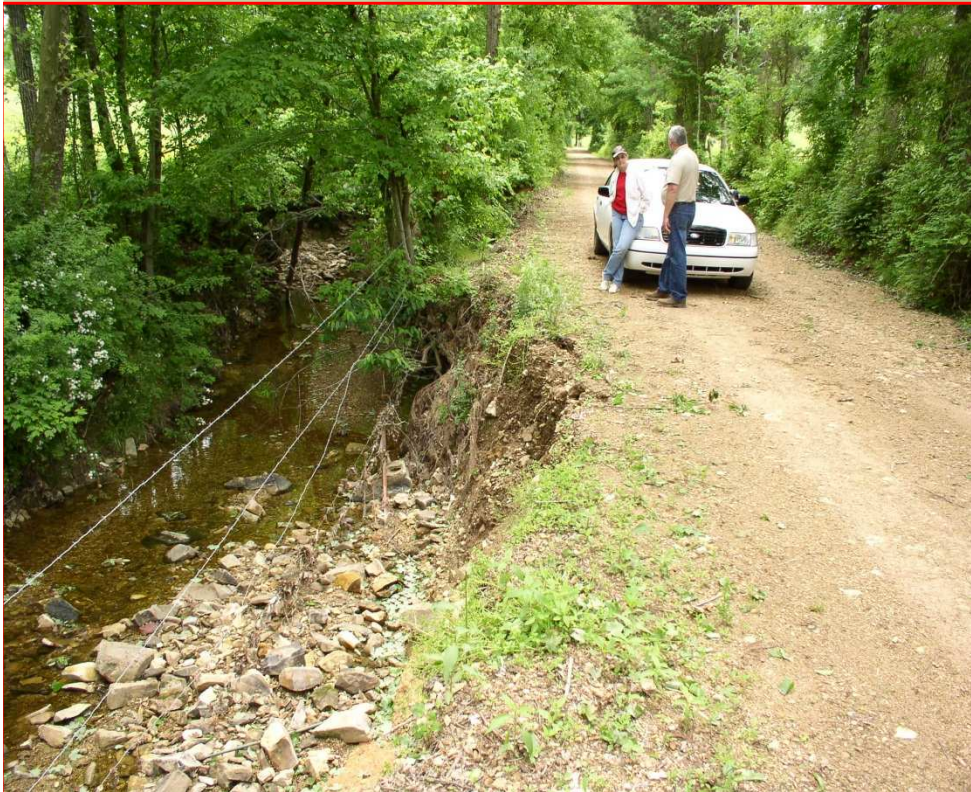
The **OBJECTIVE** of the EWP program is to assist in relieving imminent hazards to life and property from floods and **the products of erosion created by natural disasters (flood, tornados, hurricanes)** that are causing a sudden impairment of a watershed.



\$\$\$\$ EWP FUNDS \$\$\$\$

2014 – FUNDED \$554,953
PENDING \$2.6M (Congressional
Appropriation)

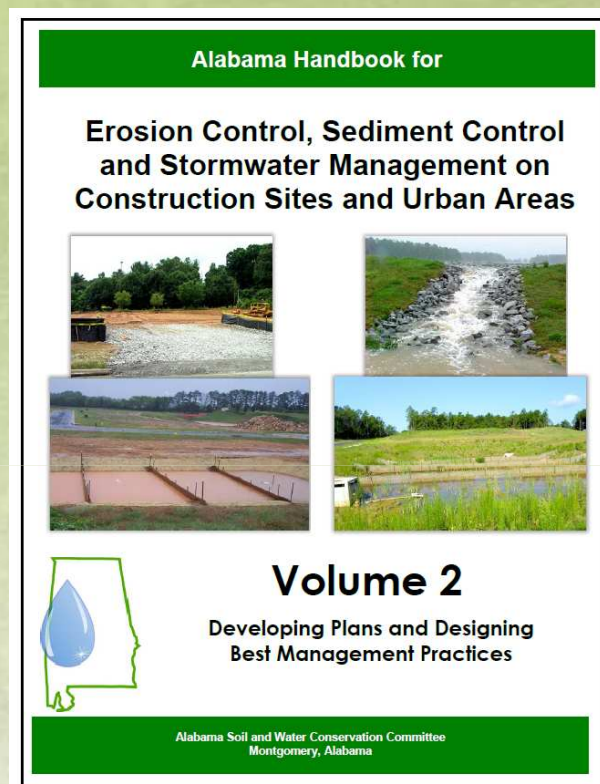
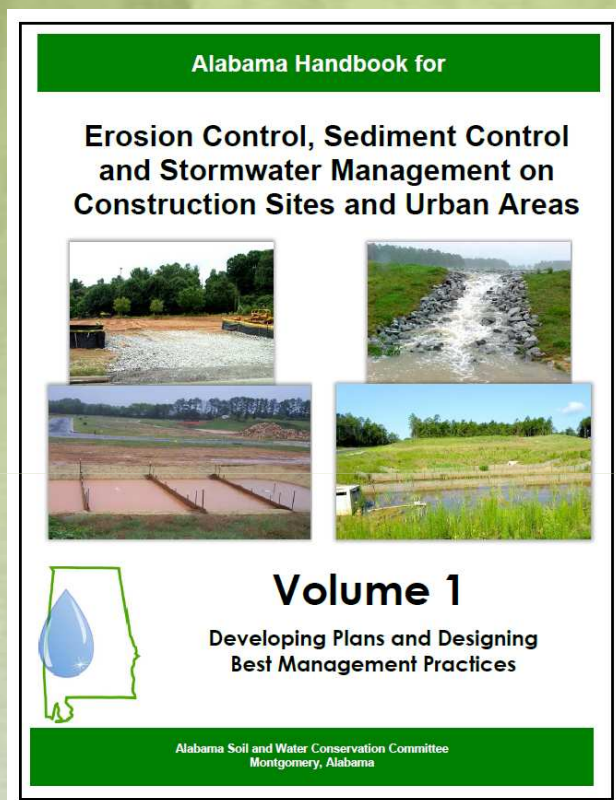
Stabilized Stream, Canal and Channel Banks



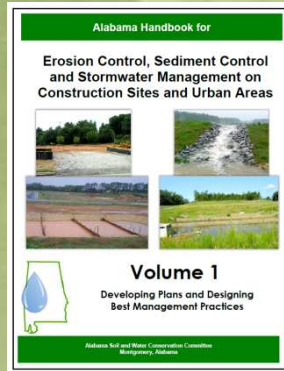
Stabilized Stream Banks, Utilities and Gullies



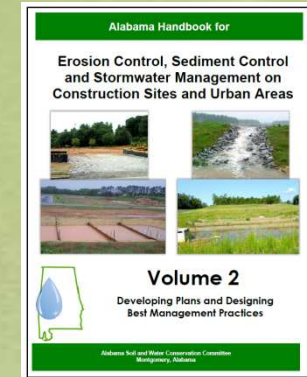
2014 Handbook Changes



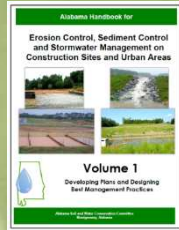
Earl Norton, CPESC, Erosion and Sediment Control Program Coordinator
Alabama Soil and Water Conservation Committee
earl_norton@yahoo.com



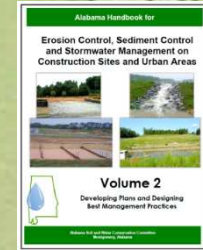
2014 Handbook Major Changes



1. Addressed invasive species, planting zones, prominence of hay bales, tree planting guidance, differences between Handbook and ALDOT specifications for Erosion Control Blankets, Hydraulic Mulches, and Type A Silt Fence
2. Revised bench (slope break) guidance in Land Grading
3. Recognized ECTC geotextile categorization in lieu of NRCS specifications
4. Removed restriction of cationic polyacrylamide from Chemical Treatment for soil stabilization and added practice Flocculant for sediment/turbidity control
5. More guidance for Groundskeeping (concrete washouts and portable toilets)
6. Recognized Sediment Retention Barrier
7. Maximum drainage area for Sediment Basin increased but not recommended
8. Added guidance for sizing Sediment Basin
9. Recognized the new Low Impact Development (LID) Handbook for AL as providing additional guidance for Bioretention Area and Porous Pavement practices



2014 Handbook Changes




Retained in Chapter 3 – General Considerations for Preparing Plans

“New or innovative conservation measures or modification to standard measures in this handbook may be used if the proposed measure is expected by the qualified design professional to be as effective as the practice for which it is being substituted.”

Electronic files available at the Alabama Soil and Water Conservation website

Handbook http://swcc.alabama.gov/pages/erosion_control.aspx?sm=b_b

CAD Drawings http://swcc.alabama.gov/pages/erosion_handbook.aspx



Thank you for your Attention

USDA- NRCS

Helping People Help the Land

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